

SEQUENCE LISTING

<110> SPECHT, THOMAS
HINZMANN, BERND
SCHMITT, ARMIN
PILARSKY, CHRISTIAN
DAHL, EDGAR
ROSENTHAL, ANDRE

<120> HUMAN NUCLEIC ACID SEQUENCES FROM HYSTEROMYOMIC TISSUE

<130> ALBRE 4

<140> 09/673,400
<141> 2000-10-17

<150> PCT/DE99/01178
<151> 1999-04-14

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<170> PatentIn Ver. 2.1

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 <211> 1769
 <212> DNA
 <213> Homo sapiens

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<211> 1026

<212> DNA

<213> Homo sapiens

<400> 13

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<211> 676

<212> DNA

<213> Homo sapiens

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<211> 1254

<212> DNA

<213> Homo sapiens

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<212> DNA
<213> *Homo sapiens*

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<210> 17
<211> 823
<212> DNA
<213> *Homo sapiens*

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<210> 18
<211> 1082
<212> DNA

<213> Homo sapiens.

<400> 18

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<210> 19

<211> 1548

<212> DNA

<213> Homo sapiens

<400> 19

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<211> 844
<212> DNA
<213> Homo sapiens

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<212> DNA
<213> Homo sapiens

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<211> 546
<212> DNA
<213> Homo sapiens

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 tgggtgttgg agaatctggt aaaagcacca ttgtgaagca gatgaggatc ctgcatttta 240
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 aagaggcgat tgaaaccatt gtggccgcca tgagcaacct ggtggccccc gtggagctgg 360
 ccaaccggc gaaccaggc acaggactt acattctgag tgttatgaaac gtgcctgact 420
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 acaagatcga cgttatcaag caggctgact atgtgccgag cgatcaggac ctgcttcgt 600
 gcccgtgtcc gacttctgga atctttgaga ccaagttcca ggtggacaaa gtcaacttcc 660
 acatgttga cgtgggtggc cagcgcgtt aacgcgcgaa gtggatccag tgcttcaacg 720
 atgtgactgc catcatcttc gtggggcca gcagcagcta caacatggc atccgggagg 780
 acaaccagac caaccgcctg caggaggctc tgaacactt caagagcatc tggaaacaaca 840
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 aagtccctgc tggaaatcg aagattgagg actactttcc agaatttgc cgctacacta 960
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 ttgtgcagca ttaaaaaaaaa tcaaaaataaa aattaaatgt gagcaaagga aaaaaaaaaa 1560
 ggcaaaaggg gaaagaagaa aaggggggggg g 1591

<210> 24
 <211> 441
 <212> DNA
 <213> Homo sapiens

<400> 24
 ggcaggcaga tacgttcgtc agcttgcctt tttctgccc tggacgcgc cgaagaagca 60
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 aacagctgag gaagcttcc attggagggt tgagctttga aacaactgtt gagagcctga 180
 ggagccattt tgagcaatgg ggaacgcgtca cggactgtgt ggtaatgaga gatccaaaca 240
 ccaaggcgtt cagggcctt gggtttgcataatgccac tgcgtggaggag gtggatgcag 300
 ctatgaatgc aaggccacac aaggtggatg gaagagttgtt ggaacccaaag agagctttt 360
 cagagaagat ttggaaagcc aggtgcact tacctgtgaa aaggattttt ttgggtggatt 420
 aaggagcact tgagacatca c 441

<210> 25

<211> 1131

<212> DNA

<213> Homo sapiens

<400> 25

cgggaggtga aatccgggttc taaccgggtcc ggggctccca gcgcataaaa aactttataa 60
 accccccgga gcccggacag tggaaagaag aggcgagaaac gaccccccggga ccgaccaaag 120
 cccgcgcgcc gctgcattcc gctccagca cttacgtccc gctggcgtcg ccggcccac 180
 catgccccaaag agaaaggctg aaggggatgc taaggagat aaagcaaaagg tgaaggacga 240
 accacagaga agatccgcga ggttgcgtgc taaacctgct cttccaaagc cagagcccaa 300
 gcctaaaaag gcccgtcaa agaaggaga gaaggatccc aaaggaaaa agggaaaagc 360
 tggatgctggc aaggaggggaa ataaccgtc agaaaaatgga gatgccaagg cagaccaggc 420
 acagaaagct gaagggtctg gagatgcca gtggaaatgtg tgcatttttg ataaactgtgt 480
 acttctggtg actgtacagt ttgaaatact attttttatac aagtttataa aaaatgoaga 540
 attttggttt atttttttt ttttttaaa agctatgtt ttagcacaca gaacacttca 600
 ttgttggttt tgggggaagg ggcataatgtc actaatagaa tgtctccaaa gctggattga 660
 tggggagaaaa acacccccc cttctatgtt tgagagactt cctcttggct cccaggagga 720
 gggattccct gacttgcaca cacatggcca ctttggcaca aaaggcttgc ggtatagaaa 780
 aacaaatttg ttttatgtc ctcttctccc tttccatctt tcagcataga cttaaactccc 840
 ttaagccag acatctgtt agacctgacc cctagtcatt gtttaccagt gtgtcaggca 900
 atctggactt tccagtgtat ccactgagat ggcacctgtc aaaagagcag tggttccatt 960
 tctagattgt ggatcttcag ataaattctg ccattttcat ttcacttcct gaaagtcaagg 1020
 gtcggcttgt gaaaagttgt taaacaacat gctaaatgtg aaatgtcaac cctcactcta 1080
 aaactttcc ctgggtcaga ggatccgatg gaggacttca attgggggtt t 1131

<210> 26

<211> 1071

<212> DNA

<213> Homo sapiens

<400> 26

gtaccctcaa agacagagac accaagaaga atcggaaacat acaggctttg atatcaaagg 60
 ttataaaagc caatatctgg gaaaagaaaa accgtgagac ttccagatct tctctggtga 120
 agtgggtttt cctgcaacga tcacgaacat gaacatcaa ggatcgccat ggaaagggtc 180
 cctcctgtcg ctgtgtgtgt ctttttttttggatccat cctgtggccag agcggtggcc 240
 ctgtccccggc ggggctgccc gatgccaggat gacccttcga gacctgttgc accgcgcgt 300
 cgtcctgtcc cactacatcc ataacccttc ctcagaaatg ttcagcgaat tcgataaacg 360
 gtatacccat ggccgggggt tcattaccaa ggccatcaac agctgccaca cttttccct 420
 tgccacccccc gaagacaagg agcaaggccca acagatgaat caaaaagact ttctgaggct 480
 gatagtccgc atattgcgtat cctggaaatga gcctctgtat catctggtca cggaaagtacg 540
 tggtatgcaa gaagccccgg aggctatccct atccaaagct gtagagatttggagcaac 600
 caaacggctt ctagagggca tggagctgtat agtcagccag gttcatcctg aaaccaaaaga 660
 aaatgagatc taccctgtct ggtcggtact tccatccctg cagatggctg atgaagagtc 720
 tcgccttct gcttattata acctgctcca ctgcctacgc agggattcac ataaaatcga 780
 caattatctc aagctcctga agtgcgaat catccacaaac aacaactgtc aagcccat 840
 ccatttcattc tatttctgag aaggtcctta atgatccgtt ccattgcaag ctttttag 900
 ttgttatctt tttgaatcca tgcttgggtg taacaggtct cctcttaaaa aataaaaact 960
 gactccttag agacatcaa atctaaaaaa acttaatggg ccgggcgcag tggctcatgg 1020
 ctgtggtccc ggactttgg gaggccgagg caggccgatc aggaggtcag g 1071

<210> 27

<211> 896

<212> DNA

<213> Homo sapiens

<400> 27

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 cccggcgcgg gagggagcga agagcgcggg cagcgagcga gatgcagcac cgaggcttc 120
 tcctcctcac cctcctcgcc ctgctggcgc tcacctccgc ggtgcacaaa aagaaagata 180
 aggtgaagaa gggcggcccg gggagcgagt gcgctgagtg ggcctggggg ccctgcaccc 240
 ccagcagcaa ggattgcggc gtgggttcc gcgagggcac ctgcggggcc cagaccacgc 300
 gcatccggtg cagggtgccc tgcaactgga agaaggagtt tggagccgac tgcaagtaca 360
 agtttgagaa ctggggtgcg tigtatgggg gcacaggcac caaagtccgc caaggcaccc 420
 tgaagaaggc gcgctacaat gctcagtgcc aggagaccat ccgcgtcacc aagccctgca 480
 cccccaaagac caaagcaaag gccaaagcca agaaaggaaa gggaaaggac tagacgc当地 540
 gcctggatgc caaggagccc ctgggtcac atggggcctg gcccacgccc tccctctccc 600
 agggccgaga tigtgaccac cagtgccctc tigtctgctc tttagcttaa tcaatcatgc 660
 cctgccttgt ccctctact ccccagcccc acccctaagt gcccaaagtg gggagggaca 720
 agggattctg ggaagcttga gcctccccca aagcaatgtg agtcccagag cccgctttg 780
 ttcttccccca caattccatt actaagaaac acatcaaata aactgacttt ttccccccaa 840
 aaaaagctct tctttttaa tataaaaaaa aaaaaaaaaa aaaaaaaaaa aagaaa 896

<210> 28
 <211> 1050
 <212> DNA
 <213> Homo sapiens

<400> 28
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 atgggttgc ctactaatac atcataaaaa ccagtagcct gcccacaacg ccaactcagg 120
 ccattcctac caaaggaaga aaggctggc tctccacccc ctgttagggaa ggcctgc当地 180
 gtaagacacc acaattcggc tgaatctgaa gtcttgcgtt ttactaatgg aaaaaaaaaa 240
 tacagaagag gtttgcgtt catggctgcc .caccgcagcc tggacttaaa acagccacgc 300
 gctcacttct gcttggagaa atatttttgc ctcttttgc catcaggcctt gatggatca 360
 ctgcccagggtt tccagccagc tgggcacact tcccatgtt tgcgtgaa ctggaaggcc 420
 tgaacttagtc tcaaagtctc atccacagag cggccaaacag ggaggtcatt tacagtgtatc 480
 tgccgaagaa tacccttatac atcaatgata aaaaggcccc tgaacgc当地 gcttcatca 540
 gcctttaaga cccctataatc ctgagaatg gtgcgttcc ggtctgatc caaaggaatg 600
 ttcatgggtc ccagtccctc ttgtttttaa ggtgtattttt cccatgctt atgacagaag 660
 tgagaatcca cagaaggcacc aatcaattttt cagttggat tcttaaattt ttctgc当地 720
 tcactgaaag caatgtatc cgtggggcac acaaagggtt agtcaagagg gtaaaaagaag 780
 aacacacaat attttccctt gtatgc当地 aggtcttat cttttttttt accatctggc 840
 ataacagctg tggcttttgc gttggggca ggggtcccaaa tttagtattt tcctgaagac 900
 atcttcctat cagcgtccc aacacaatgc gcagaaacta accacgc当地 ccaggcaaga 960
 acaagacgc当地 caagagctct ccggggcgct gcctttatag ccagtaggga tctcgccaca 1020
 gtcggaaacgg acgggggtgc cggagtagga 1050

<210> 29
 <211> 581
 <212> DNA
 <213> Homo sapiens

<400> 29
 caggcttcct tctggcaaca ggcgtgggtc acgctctcgc tcggctttc tgccgccc当地 60
 ttgggttc当地 gttccctgca caaaaatgccc ggcgaacacc agaaaccgtc cctgctacag 120
 agcaggagtt gccc当地 caggctgaga cagggtctgg aacagaatct gacagtgtatc 180
 aatcagtagacc agagcttgc当地 gaacaggatt ccacccaggc aaccacacaa caagccacgc 240
 tggcggc当地 agctgaaatc gatgaagaac cagtcagtaa agcaaaaacag agtcggagtg 300
 aaaagaaggc acgaaaggct atgtccaaac tgggtcttc当地 gcaggttaca ggagttacta 360
 gagtcactat ccgaaatct aagaatatcc tctttgtcat cacaaaacca gttgtctaca 420
 agagccctgc ttcaagatacg tacatagttt ttggggaaagc cagatcgaag attatccag 480
 caagcacaac tagcagctgc tgagaagtca agttcaggtg aactgtctca acgttcagga 540

aaccccccggc ttccactgta gagggggagt aaggggagg t

581

<210> 30
<211> 264
<212> DNA
<213> Homo sapiens

<400> 30
gggactatgt tggagcctg cgaaagaagt ttgtgtgggg actgtggca gtgaatgcgt 60
tgggaacaat atggaaaact gggagctgcc ctcagtttct ccccaagttg gactcaactt 120
cggggtgtcc caaaaggctg attccaggc ctgctagccc gaccccggtg acgcctccac 180
ccgcgcctgg ccccagcctt cacccgcgtat cgccgcctc cggggcacac cctccgcag 240
aaaacagccg gcgggccccg agac 264

<210> 31
<211> 111
<212> DNA
<213> Homo sapiens

<400> 31
cggcgaatca cttataaatg ggcggaaagc aggagcccgaggctaaatt gcaaggagggg 60
tgagcgaatg ctgtgcttct atgggcctct tacgttgatg aggcaaagta t 111

<210> 32
<211> 76
<212> PRT
<213> Homo sapiens

<400> 32
Pro Phe Cys Glu Glu Thr Lys Thr Glu Arg Leu Trp Pro Arg Cys Arg
1 5 10 15

Pro Pro Ala Ala Val Gly Phe Ser Thr Gln Asn Pro Gly Val Gly Asp
20 25 30

Ser Glu Ser Asn Leu Phe Ser Leu Pro Phe Leu Gly Ser Lys Ala Asn
35 40 45

Pro Ile Pro Thr His Trp Ser Ser Ala Leu Ile Phe Asn Leu Pro Ser
50 55 60

Pro Pro Phe Gln Asn Thr His Ile Pro Phe Gln Asn
65 70 75

<210> 33
<211> 72
<212> PRT
<213> Homo sapiens

<400> 33
Ser Ser Phe Leu Phe Ser Phe Gln Thr Gln Phe His Lys Asn Arg Lys
1 5 10 15

Asp Lys Val Phe Ser Ser Arg Gln Ala Lys Pro Phe Pro His His Gln
 20 25 30

Ser Ile Leu Lys Ile His Glu Glu Val Glu Arg Ser Val Ser Gly Arg
 35 40 45

Leu Lys Gly Ser Ser Ser Asn Pro Thr Ala Ala Glu Lys Ile Glu
 50 55 60

Ile Glu Ile Leu Lys Ile Thr Ser
 65 70

<210> 34

<211> 70

<212> PRT

<213> Homo sapiens

<400> 34

Lys Lys Leu Asp Tyr Phe Cys Ala Glu Ile Lys Asn Ser His Cys Lys
 1 5 10 15

Thr Lys Ile Lys Ile Ala Gln Ile Arg Lys Pro Gly Gly Ala Lys Cys
 20 25 30

Gln Val Ser Lys Val His Phe Phe Ser Leu Ser Lys Arg Ser Ser Thr
 35 40 45

Lys Thr Ala Arg Ile Lys Phe Ser Val Ala Asp Lys Gln Ser Pro Phe
 50 55 60

His Ile Ile Asn Gln Ser
 65 70

<210> 35

<211> 60

<212> PRT

<213> Homo sapiens

<400> 35

Ser Ser Gly Pro Ala Pro Gly Cys Ser Pro Phe Ala Gly Thr Arg Lys
 1 5 10 15

Asn Phe Pro Ser Met Val Val Leu Glu Arg Thr Phe Leu Lys Ile Asn
 20 25 30

Tyr Ile Phe Leu Cys Ile Pro Met Glu Phe Gln Phe Ile Arg Cys Ser
 35 40 45

Pro Trp Pro Pro Gln Asn Thr Glu Val Ile Pro Ala
 50 55 60

<210> 36

<211> 63

<212> PRT

<213> Homo sapiens

<400> 36

Ala Ser Gly Val His Thr Glu Thr His Arg Tyr Asn Leu Leu Ser Ala			
1	5	10	15

Lys Ser Arg Lys Lys Gly Trp Gly Tyr Leu Gly Trp Leu Gly Phe Asp			
20	25	30	

Phe Leu Leu Val Cys Leu Phe Cys Thr Lys Thr Val Leu Ser Phe Glu			
35	40	45	

Tyr Arg Arg Asp Ile Ser Ile Tyr Met Leu Ser Asn Gln Asp Gly			
50	55	60	

<210> 37

<211> 170

<212> PRT

<213> Homo sapiens

<400> 37

Ala Arg Ala Ala Arg Ala Ala Gln Thr Pro His Leu Thr Leu Pro Ala			
1	5	10	15

Asp Leu Gln Thr Leu His Leu Asn Arg Pro Thr Leu Ser Pro Glu Ser			
20	25	30	

Lys Leu Glu Trp Asn Asn Asp Ile Pro Glu Val Asn His Leu Asn Ser			
35	40	45	

Glu His Trp Arg Lys Thr Glu Lys Trp Thr Gly His Glu Glu Thr Asn			
50	55	60	

His Leu Glu Thr Asp Phe Ser Gly Asp Gly Met Thr Glu Leu Glu Leu			
65	70	75	80

Gly Pro Ser Pro Arg Leu Gln Pro Ile Arg Arg His Pro Lys Glu Leu			
85	90	95	

Pro Gln Tyr Gly Pro Gly Lys Asp Ile Phe Glu Asp Gln Leu Tyr			
100	105	110	

Leu Pro Val His Ser Asp Gly Ile Ser Val His Gln Met Phe Thr Met			
115	120	125	

Ala Thr Ala Glu His Arg Ser Asn Ser Ser Ile Ala Gly Lys Met Leu			
130	135	140	

Thr Lys Val Glu Lys Asn His Glu Lys Glu Lys Ser Gln His Leu Glu			
145	150	155	160

Gly Ser Ala Ser Ser Ser Leu Ser Ser Asp			
165	170		

<210> 38

<211> 144

<212> PRT

<213> Homo sapiens

<400> 38

Ala	Arg	Ala	Pro	Thr	Leu	Asp	Met	Arg	Phe	Arg	Arg	Arg	Leu	Ser	Ala
1							5			10			15		

Asp	Pro	His	Ala	Thr	Gln	Arg	Asn	Ser	Ala	Glu	Ala	Arg	Gly	Thr	Met
										25			30		

Asp	Gly	Arg	Val	Gln	Leu	Met	Lys	Ala	Leu	Leu	Ala	Gly	Pro	Leu	Arg
								35	40			45			

Pro	Ala	Ala	Arg	Arg	Trp	Arg	Asn	Pro	Ile	Pro	Phe	Pro	Glu	Thr	Phe
								50	55		60				

Asp	Gly	Asp	Thr	Asp	Arg	Leu	Pro	Glu	Phe	Ile	Val	Gln	Thr	Cys	Ser
						65		70			75		80		

Tyr	Met	Phe	Val	Asp	Glu	Asn	Thr	Phe	Ser	Asn	Asp	Ala	Leu	Lys	Val
							85		90			95			

Thr	Phe	Leu	Ile	Thr	Arg	Leu	Thr	Gly	Pro	Ala	Leu	Gln	Trp	Val	Ile
							100		105			110			

Pro	Tyr	Ile	Arg	Lys	Glu	Ser	Pro	Leu	Leu	Asn	Asp	Tyr	Arg	Gly	Phe
							115		120			125			

Leu	Ala	Glu	Met	Lys	Arg	Val	Phe	Gly	Trp	Glu	Asp	Glu	Asp	Phe
						130		135			140			

<210> 39

<211> 178

<212> PRT

<213> Homo sapiens

<400> 39

His	Ser	Leu	Gly	Arg	Ala	Pro	Val	Glu	Thr	Leu	Ala	Val	Ala	Thr	Gly
1							5			10			15		

Thr	Ala	Asn	Ser	Ser	Gln	Ser	Thr	Arg	Pro	Gln	Ala	Arg	Gly	Ser	Pro
							20		25			30			

Gly	Leu	Glu	Val	Leu	Val	Leu	Leu	Pro	Ser	Lys	Asp	Ser	Leu	His	Leu
							35		40			45			

Gly	Gln	Lys	Ala	Pro	Val	Ile	Ile	Glu	Gln	Gly	Ala	Leu	Leu	Pro	Asp
						50		55			60				

Val	Gly	Asp	His	Pro	Leu	Gln	Gly	Trp	Pro	Arg	Glu	Ala	Gly	Asp	Glu
65							70			75			80		

Glu	Arg	His	Leu	Gln	Gly	Val	Val	Gly	Glu	Arg	Val	Leu	Val	His	Glu
						85		90			95				

His	Val	Gly	Ala	Arg	Leu	His	Asp	Glu	Leu	Arg	Glu	Ser	Val	Gly	Ile
						100		105			110				

Ser Val Lys Arg Leu Gly Lys Gly Asn Arg Val Pro Pro Ala Thr Arg
 115 120 125

Arg Gly Pro Glu Gly Pro Gly Gln Glu Gly Leu His Gln Leu His Pro
 130 135 140

Thr Val His Arg Ala Ala Arg Leu Arg Gly Val Ser Leu Gly Cys Val
 145 150 155 160

Gly Val Ser Ala Lys Ala Ser Pro Glu Ala His Val Glu Gly Gly
 165 170 175

Pro Gly

<210> 40

<211> 89

<212> PRT

<213> Homo sapiens

<400> 40

Lys Leu Thr Gly Ile Asn Thr Gly Cys Arg Asn Met Leu Ala Leu Cys
 1 5 10 15

Ile Arg Gly His Ala Gln Gln Ile Gln Glu Ile Tyr Leu Ala Thr Phe
 20 25 30

Ser Arg Lys Gly Thr Leu Gly Ile Ile His Tyr Ile Leu Glu Val Phe
 35 40 45

Leu Gly Phe Phe Phe Phe Leu Arg Gln Ser Cys Cys Ile Ala Gln
 50 55 60

Ala Gly Ser Val Val Ala Gln Ser Gln Leu Ile Ala Ser Ser Ile Thr
 65 70 75 80

Gln Gly Leu Ser Asn Pro Pro Thr Leu
 85

<210> 41

<211> 95

<212> PRT

<213> Homo sapiens

<400> 41

Ile Val Thr Trp Arg Lys Val Pro Met Ser Leu Cys Gln Arg Pro Pro
 1 5 10 15

Pro Phe Val Arg Ile Gly Ile Phe Arg Leu Leu Lys Gly Leu Ala His
 20 25 30

Ile Arg Cys Asp Leu Phe Ile Pro Val Val Met Glu Gly His Ile Cys
 35 40 45

Gln Ser Leu Glu Ser Ala Lys Ala Gly Thr Arg Phe Pro Gly Pro Gln
 50 55 60

Trp Gly Cys Ala Asn Pro Arg Glu Leu Gly Cys Lys Phe Val Lys Asn
 65 70 75 80

Gln His His Val Trp Gln Leu Ser Ile Gly Ala Arg Ser Leu Pro
 85 90 95

<210> 42

<211> 154

<212> PRT

<213> Homo sapiens

<400> 42

Cys Gln Leu Val Phe Arg Ile Gln Thr Asp Gly Ser Tyr Trp Ser Leu
 1 5 10 15

Gly Leu Thr Ser Ser Gly Asn Ile Thr Phe Ser Trp Ala Glu Met Leu
 20 25 30

Leu Pro Ala Leu Lys Gln His Ser Val Leu Lys Thr Ser Trp Gln Ala
 35 40 45

Pro Gly Ser Asn Thr Gln Leu Pro Asn Met Met Leu Ile Leu His Glu
 50 55 60

Phe Ala Thr Gln Phe Ser Arg Val Cys Thr Pro Pro Leu Trp Ala Gly
 65 70 75 80

Glu Pro Gly Pro Gly Leu Arg Arg Leu Gln Ala Leu Ala Asp Val Ala
 85 90 95

Leu His Asn Asn Gly Asn Glu Lys Val Thr Pro Tyr Val Arg Gln Ala
 100 105 110

Leu Lys Glu Ser Glu Tyr Pro Asn Pro His Lys Arg Arg Gly Thr Leu
 115 120 125

Ala Lys Thr His Gly Asn Phe Pro Pro Ser Asn Asp Leu Asp Arg Arg
 130 135 140

Ala Thr Gln Asp Ser Pro Ser Cys Ser Val
 145 150

<210> 43

<211> 79

<212> PRT

<213> Homo sapiens

<400> 43

Leu Ala Ser Thr Leu Gly Val Glu Thr Cys Leu Pro Tyr Val Ser Glu
 1 5 10 15

Asp Met Leu Ser Arg Ser Lys Arg Tyr Ile Trp Gln Leu Phe Leu Glu
 20 25 30

Lys Ala His Trp Val Ser Phe Ile Thr Phe Leu Ser Phe Phe Gly Phe
 35 40 45

Phe Phe Phe Phe Glu Thr Val Leu Leu Tyr Cys Pro Gly Trp Ser
 50 55 60

Val Val Ala Gln Ser Gln Leu Ile Ala Ser Ser Ile Thr Gln Ala
 65 70 75

<210> 44
 <211> 82
 <212> PRT
 <213> Homo sapiens

<400> 44
 Cys Gln Leu Val Phe Arg Ile Gln Thr Asp Gly Ser Tyr Trp Ser Leu
 1 5 10 15

Gly Leu Thr Ser Ser Gly Asn Ile Thr Phe Ser Trp Ala Glu Met Leu
 20 25 30

Leu Pro Ala Leu Lys Gln His Ser Val Leu Lys Thr Ser Trp Gln Ala
 35 40 45

Pro Gly Ser Asn Thr Gln Leu Pro Asn Met Met Leu Ile Leu His Glu
 50 55 60

Phe Ala Thr Ser Trp Leu Pro Arg Leu Gln His Ser Ala Val Gly Thr
 65 70 75 80

Gln Ser

<210> 45
 <211> 68
 <212> PRT
 <213> Homo sapiens

<400> 45
 Arg Gly Ser Lys Asp Arg Asn Ser Gly Gln Gly Ser Gly Ser Tyr Gly
 1 5 10 15

Gln Leu Ser Cys Arg Gly Phe Ser Asp Gln Phe Ser Arg Val Cys Thr
 20 25 30

Pro Pro Leu Trp Ala Gly Glu Pro Gly Pro Gly Leu Arg Arg Leu Gln
 35 40 45

Ala Leu Ala Asp Val Ala Leu His Asn Asn Gly Asn Glu Lys Val Thr
 50 55 60

Pro Tyr Val Arg
 65

<210> .46
<211> 87
<212> PRT
<213> Homo sapiens

<400> 46
Asp Tyr Val Val Ser Leu Arg Lys Lys Phe Val Trp Gly Leu Trp Ala
1 5 10 15

Val Asn Ala Leu Gly Thr Ile Trp Lys Thr Gly Ser Cys Pro Gln Phe
20 25 30

Leu Pro Lys Leu Asp Ser Leu Ser Gly Cys Pro Lys Ser Leu Ile Pro
35 40 45

Gly Pro Ala Ser Pro Thr Pro Val Thr Pro Pro Pro Pro Ala Pro Gly Pro
50 55 60

Ser Leu His Pro Arg Ser Pro Pro Ser Gly Ala His Pro Pro Pro Glu
65 70 75 80

Asn Ser Arg Arg Ala Ala Arg
85

<210> 47
<211> 51
<212> PRT
<213> *Homo sapiens*

<400> 47
Gln Ala Leu Glu Ser Gly Phe Trp Asp Thr Pro Lys Val Ser Pro Thr
1 5 10 15

His Ser Leu Pro Thr Val Pro Thr Gln Thr Ser Phe Ala Gly Ser Gln
35 40 45

His Ser Pro
50

<210> 48
<211> 20
<212> PRT
<213> *Homo sapiens*

<400> 48
Arg Arg Ile Thr Tyr Lys Trp Arg Arg Ser Arg Ser Pro Lys Ala Lys
1 5 10 15

Leu Gln Glu Gly
20

<210> 49
<211> 36
<212> PRT
<213> Homo sapiens

<400> 49
Gly Glu Ser Leu Ile Asn Gly Ala Glu Ala Gly Ala Arg Arg Leu Asn
1 5 10 15
Cys Arg Arg Gly Glu Arg Met Leu Cys Phe His Gly Pro Leu Thr Leu
20 25 30
Met Arg Gln Ser
35

<210> 50
<211> 26
<212> PRT
<213> Homo sapiens

<400> 50
Lys His Ser Ile Arg Ser Pro Leu Leu Gln Phe Ser Leu Arg Ala Pro
1 5 10 15
Ala Ser Ala Pro Phe Ile Ser Asp Ser Pro
20 25

<210> 51
<211> 25
<212> PRT
<213> Homo sapiens

<400> 51
Glu Ala His Glu Ser Thr Ala Phe Ala His Pro Ser Cys Asn Leu Ala
1 5 10 15
Phe Gly Leu Leu Leu Arg Arg His Leu
20 25

<210> 52
<211> 3665
<212> DNA
<213> Homo sapiens

<400> 52
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ctcccccttct tggcagcaa ggcgaacccc atccctactc actggagctc agctttgatt 180
tttaacctcc cttccccacc cttccagaac acacacattc cattccaaaa ctgattttat 240
aaagacattt taaacataat gatgcaactt ggtgtgcact acagcaaatg tacaggtgtt 300
ttttttttaa ttgtttccaa aaccggggacc tgatattaag atgtaatttt taaaatttct 360
atttctatcc tttctgcagc agttgggtta gaggaggagg agccttttag cctctataa 420
actgacctct ctacttcctc gtgtatttt aagattgatt gatgatgtgg aaaggcctt 480
gcttgtctgc tactgaaaac tttatctgc gtttttgc gaaactgctt ttggaaagag 540
aaaagaaaatg aacttactg acttgacatt tttgcaccc ccgttttct aatctggct 600

atttttatTT ttgtttttt acagttagat tttttgatc ttcagcttac attttcgggc 660
 tttgtgagga aacctttacc catcaaacac gatggccagc aacgttacca acaagacaga 720
 tcctcgctcc atgaactccc gtgtattcat tggaatctc aacactcttg tggtaagaa 780
 atctgatgtg gaggcaatct ttcaagta tggcaaaaatt gtggctgct ctgttcataa 840
 gggcttgcc ttcgttcagt atgttaatga gagaaatgcc cgggctgctg tagcaggaga 900
 ggatggcaga atgattgctg gccaggttt agatattaac ctggctgcag agccaaaagt 960
 gaaccgagga aaagcagggtg tgaaacgatc tgcagcggag atgtacggct ccttttga 1020
 cttggactat gacttcaac gggactatta tgataggatg tacagttacc cagcacgtgt 1080
 acctcctcct cctccttattt ctcggctgt agtgcctcg aaacgtcagc gtgtatcagg 1140
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 caaggatgat gaaaaagagg ctgaggaagg agaggatgac agagacaagg ccaatggcga 1560
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 atatTTTGT tggagtcata atcatgatgc ataccaacac aacactactc aaatttatatt 2400
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 agaaaagaat gaagaggctg aagtatgaac tacccttggg gcccataatac atgatataagg 3240
 caatTTTGT tggatgttca ttcagtcata aataactaccc acttgatgtt ttctaatctg 3300
 atgtgagctc atgttacaca gacttttagt aagtaacccg tgactagaaa ataaaactgga 3360
 tgcttaggag agagtgtcag atgtataaga tgctaataaa acctgttttatttattt 3420
 agctgttaatgt tttggggaaa tactgaacaa attagtccac aatcaagtgt ctactttcc 3480
 cttcactgtt gggctctcc ctgcacagag cagtctgttt agctgtgaac accacaatct 3540
 gcagatgttc aagtccctta cataaaatgg catagtttattt atatgttaacc tatgcatatt 3600
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 aaaaaa

3665

<210> 53
 <211> 301
 <212> PRT
 <213> Homo sapiens

<400> 53
 Gly Asn Leu Tyr Pro Ser Asn Thr Met Ala Ser Asn Val Thr Asn Lys
 1 5 10 15

 Thr Asp Pro Arg Ser Met Asn Ser Arg Val Phe Ile Gly Asn Leu Asn
 20 25 30

 Thr Leu Val Val Lys Lys Ser Asp Val Glu Ala Ile Phe Ser Lys Tyr
 35 40 45

 Gly Lys Ile Val Gly Cys Ser Val His Lys Gly Phe Ala Phe Val Gln
 50 55 60

 Tyr Val Asn Glu Arg Asn Ala Arg Ala Ala Val Ala Gly Glu Asp Gly
 65 70 75 80

 Arg Met Ile Ala Gly Gln Val Leu Asp Ile Asn Leu Ala Ala Glu Pro
 85 90 95

 Lys Val Asn Arg Gly Lys Ala Gly Val Lys Arg Ser Ala Ala Glu Met
 100 105 110

 Tyr Gly Ser Ser Phe Asp Leu Asp Tyr Asp Phe Gln Arg Asp Tyr Tyr
 115 120 125

 Asp Arg Met Tyr Ser Tyr Pro Ala Arg Val Pro Pro Pro Pro Pro Ile
 130 135 140

 Ala Arg Ala Val Val Pro Ser Lys Arg Gln Arg Val Ser Gly Asn Thr
 145 150 155 160

 Ser Arg Arg Gly Lys Ser Gly Phe Asn Ser Lys Ser Gly Gln Arg Gly
 165 170 175

 Ser Ser Lys Ser Gly Lys Leu Lys Gly Asp Asp Leu Gln Ala Ile Lys
 180 185 190

 Lys Glu Leu Thr Gln Ile Lys Gln Lys Val Asp Ser Leu Leu Glu Asn
 195 200 205

 Leu Glu Lys Ile Glu Lys Glu Gln Ser Lys Gln Ala Val Glu Met Lys
 210 215 220

 Asn Asp Lys Ser Glu Glu Gln Ser Ser Ser Ser Val Lys Lys Asp
 225 230 235 240

 Glu Thr Asn Val Lys Met Glu Ser Glu Gly Gly Ala Asp Asp Ser Ala
 245 250 255

 Glu Glu Gly Asp Leu Leu Asp Asp Asp Asp Asn Glu Asp Arg Gly Asp
 260 265 270

 Asp Gln Leu Glu Leu Ile Lys Asp Asp Glu Lys Glu Ala Glu Glu Gly
 275 280 285

 Glu Asp Asp Arg Asp Lys Ala Asn Gly Glu Asp Asp Ser
 290 295 300

<210> 54
<211> 112
<212> PRT
<213> *Homo sapiens*

<400> 54
 Glu Ser Ser Ser Pro Leu Ala Leu Ser Leu Ser Ser Ser Pro Ser Ser
 1 5 10 15
 Ala Ser Phe Ser Ser Ser Leu Ile Asn Ser Ser Trp Ser Ser Pro Arg
 20 25 30
 Ser Ser Leu Ser Ser Ser Ser Ser Arg Ser Pro Ser Ser Ala Glu Ser
 35 40 45
 Ser Ala Pro Pro Ser Asp Ser Ile Phe Thr Leu Val Ser Ser Phe Phe
 50 55 60
 Thr Glu Leu Leu Leu Cys Ser Ser Ser Asp Leu Ser Phe Phe Ile Ser
 65 70 75 80
 Thr Ala Cys Leu Leu Cys Ser Phe Ser Ile Phe Ser Arg Phe Ser Arg
 85 90 95
 Arg Glu Ser Thr Phe Cys Phe Ile Trp Val Ser Ser Phe Leu Met Ala
 100 105 110

<210> 55
<211> 107
<212> PRT
<213> *Homo sapiens*

<400> 55
 Thr Arg Asn Leu Glu Lys Lys Lys Lys Asn Phe Leu Phe Leu Tyr
 1 5 10 15

 Phe Ile Ile Val Tyr Phe Lys Leu Cys Phe Thr Ala Ser Ser Thr Lys
 20 25 30

 Pro Leu Glu Cys Thr Arg Tyr Ile Phe Leu Gly Val Ile Ile Met Met
 35 40 45

 His Thr Asn Thr Thr Leu Leu Lys Leu Tyr Phe Ile Glu Met His Val
 50 55 60

 Ala Leu Arg Ser Gln Leu Asp Ile Glu Trp Arg Leu Phe Gln Asn Gly
 65 70 75 80

 Phe Tyr Ile Leu Met Lys Val Trp Glu Val Tyr Pro Leu Cys Leu Phe
 85 90 95

 Ile Ser Ala Leu Trp Ser Ser Trp His Pro Phe
 100 105

<210> 56
<211> 13
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Partial cDNA
sequence e.g., EST or contig. S

<400> 56
gcctcaagtt atc

13

<210> 57
<211> 29
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Consensus
sequence .C

<400> 57
atgtccctagc ctcaagttat cagatgcaa

29